## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (currently amended): A ~~fuzzy audio~~ wireless digital audio music system for spread spectrum ~~BLUETOOTH~~ communication of an audio music signal from the ~~non-BLUETOOTH~~ analog headphone jack connected to a battery powered ~~BLUETOOTH compliant~~ spread spectrum transmitter and received by a battery powered ~~BLUETOOTH compliant~~ spread spectrum headphone receiver comprising:

~~a~~ an ~~NON-BLUETOOTH compliant~~ analog headphone jack from an audio music source in communication with ~~said~~ a battery powered ~~BLUETOOTH compliant~~ digital transmitter;

said battery powered ~~BLUETOOTH compliant~~ digital transmitter converts an analog audio music signal from said existing ~~non-BLUETOOTH~~ analog headphone jack to a ~~BLUETOOTH compliant~~ digital signal using ~~a CODEC and a BLUETOOTH front end~~ an ADC in communication with an encoder at a signal rate of less than approximately ~~1.4~~ 1.0 Mbps ~~as defined in the BLUETOOTH standard~~;

said ~~CODEC~~ encoder in communication with a ~~shift register generator that is BLUETOOTH compliant to create a unique user code and a convolutional~~ channel encoder;

said ~~shift register generator~~ channel encoder in communication with a digital low pass filter ~~spread spectrum modulator that is BLUETOOTH compliant~~;

said ~~BLUETOOTH compliant~~ digital low pass filter ~~spread spectrum modulator~~ in communication with a digital modulator ~~transmit antenna for BLUETOOTH compliant transmission of a coded BLUETOOTH compliant packet to a receiving antenna at a radio frequency of approximately 2.4 GHz as defined in the BLUETOOTH standard~~;

said digital modulator in communication with a spread spectrum communication modulator that utilizes a code generator to create user code;

said spread spectrum communication modulator in communication with a transmit antenna that transmits at a radio frequency of approximately 2.4 GHz for receipt by a receiving

antenna;

said receiving antenna in communication with a spread spectrum communication demodulator ~~that is BLUETOOTH compliant and a convolutional decoder; and~~

said ~~BLUETOOTH compliant~~ spread spectrum communication demodulator in communication with a receiver code generator and with a digital demodulator;

said digital demodulator in communication with a wide bandpass filter;

said wide bandpass filter in communication with a channel decoder ~~a fuzzy logic detection system for additional decoding performance.~~;

said channel decoder in communication with a receiver decoder;

said receiver decoder in communication with a DAC;

said DAC in communication with a low pass filter to pass the analog music signal in the approximate frequency band of 20 Hz to 20 kHz; and

said low pass filter passing analog music signal will be amplified for processing to a speaker headphone set to provide high quality music for listening by a single user wearing the headphones.

2. (canceled):

3. (canceled):

4. (currently amended): A method for battery powered wireless ~~BLUETOOTH~~ communication transmission and reception of high fidelity audio music between a battery operated ~~BLUETOOTH compliant~~ digital transmitter and a battery operated ~~BLUETOOTH compliant~~ digital receiver headphone comprising the step of:

connecting ~~a headphone~~ the plug attached to said battery operated ~~BLUETOOTH compliant~~ digital transmitter to the existing ~~non-BLUETOOTH compliant~~ analog headphone jack of an audio music source;

converting a music audio signal to a ~~BLUETOOTH~~ digital communication signal using an ADC in communication with an encoder ~~a CODEC and a BLUETOOTH front end~~;

encoding the ~~BLUETOOTH~~ communication signal using ~~BLUETOOTH standard~~ channel encoding;

digital low pass filtering the communication signal;

modulating the digital communication signal using a digital modulator;

creating a ~~BLUETOOTH standard~~ spread spectrum signal using a code ~~shift register~~ generator to modulate a unique user code ~~that adheres to the BLUETOOTH standard~~;

transmitting said ~~BLUETOOTH standard~~ spread spectrum signal at a radio frequency of approximately 2.4 GHz at a power level ~~that adheres to the BLUETOOTH standard~~ for reception at a distance ~~less than~~ up to approximately 10 ~~30~~ feet from said battery operated ~~BLUETOOTH compliant~~ transmitter;

receiving said ~~BLUETOOTH compliant~~ spread spectrum signal at said battery operated ~~BLUETOOTH compliant~~ receiver headphones;

demodulating said ~~BLUETOOTH compliant~~ spread spectrum signal;

demodulating said digital communication signal;

bandpass filtering said digital communication signal;

channel decoding of said ~~BLUETOOTH~~ digital communication signal ~~as defined in the BLUETOOTH standard, with an option to apply fuzzy logic detection system to enhance bit detection performance~~;

converting said ~~BLUETOOTH~~ digital communication signal back to said analog music audio signal using a ~~CODEC~~ decoder in communication with a DAC; and

communication said analog music audio signal to a headphone speaker within the ~~BLUETOOTH compliant~~ headphone receiver.

5. (canceled):

6. (new): An audio music digital wireless transmitter for spread spectrum communication of an audio music signal from an analog headphone jack connected to a battery powered spread spectrum transmitter comprising:

an analog headphone jack from an audio music source in communication with a battery powered digital transmitter;

said battery powered digital transmitter converts an analog audio music signal from said existing analog headphone jack to a digital signal using an ADC in communication with an encoder at a signal rate of less than approximately 1.0 Mbps ;

said encoder in communication with a channel encoder;

said channel encoder in communication with a digital low pass filter ;

said digital low pass filter in communication with a digital modulator ;

said digital modulator in communication with a spread spectrum communication

modulator that utilizes a code generator to create user code; and

said spread spectrum communication modulator in communication with a transmit antenna that transmits at a radio frequency of approximately 2.4 GHz for receipt by a receiving antenna.

7. (new): An audio music digital wireless receiver for spread spectrum communication of an audio music signal to be received by a battery powered spread spectrum headphone receiver comprising:

a receiving antenna in communication with a spread spectrum communication demodulator

said spread spectrum communication demodulator in communication with a code generator and with a digital demodulator;

said digital demodulator in communication with a wide bandpass filter;

said wide bandpass filter in communication with a channel decoder;

said channel decoder in communication with a decoder;

said decoder in communication with a DAC;

said DAC in communication with a low pass filter to pass the analog music signal in the approximate frequency band of 20 Hz to 20 kHz; and

said low pass filter passing analog music signal will be amplified for processing to a speaker headphone set to provide high quality music for listening by a single user wearing the headphones.